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Original Research Article

Primary Parapharyngeal Tumours - Our Experience

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ABSTRACT

Objective: We present a retrospective study of 10 patients who were diagnosed with primary parapharyngeal tumour and subsequently treated at our institute in the last 2 years. Presentation, surgical approach, histological data and post-operative complications were reviewed.
Data Source: Medical Records Department of Sree Mookambika Institute of Medical Sciences
Result: The mean age group was 43.5 yrs, with a sex ratio of 3:7 (M:F).The most common presentation was painless neck swelling (70%), Throat discomfort (20%) , intraoral swelling (20%) , Ear ache (10)% and haemoptysis (10%). Among the tumour types the salivary group comprised the maximum of 50%, miscellaneous group (40%) and neurogenic group (10%). Surgically, transparotid approach was used in 50%, transcervical in 30% and transoral in 20% of the cases.
Conclusions: Despite the rarity of occurrence of primary parapharyngeal tumours, these lesions pose a unique challenge to the head and neck surgeon, with regard to both diagnosis and their management. A combination of thorough clinical evaluation, appropriate investigations and right choice of surgical approach aids the successful management of these tumours.

Key words: Parapharyngeal tumours, parapharyngeal space lesions, parapharyngeal mass, surgical approach, recurrence, complications.

INTRODUCTION

Parapharyngeal tumours are rare, accounting for about 0.5% to 1% of all head and neck tumours. [1] The parapharyngeal space is found in the suprahyoid neck between the hyoid bone and skull base. It is lateral to pharynx and comprises of two compartments, the prestyloid and post styloid parapharyngeal space, separated by the tensor veli palatine muscle and styloid process. About 80% of these tumors are benign and other 20% are malignant. The differential diagnosis of the primary parapharyngeal tumor includes salivary gland neoplasm, neurogenic tumor and many miscellaneous tumors. Benign and malignant tumors can arise from any of the structures contained within the parapharyngeal space. Also, malignant tumors from adjacent areas (e.g. the pharynx) can extend into the parapharyngeal space by direct growth, or distant tumors may metastasize to the lymphatics within the space. [2] Owing to their location, they

present with varied non-specific signs and symptoms resulting in delay in diagnosis and treatment. Hence, these tumours are diagnostic as well as therapeutic challenge to the clinician. This is a retrospective review of parapharyngeal space tumours managed over a period of 24 months in the department of ENT, Sree Mookambika Institute of Medical Sciences, Kulasekharam, a teritiary care teaching hospital. We analysed the mode of presentation, histologic types, various diagnostic tools and the surgical approaches which we have employed in our series.

MATERIALS AND METHODS

This is a retrospective study of all patients who presented at the Department of ENT, Sree Mookambika Institute of Medical Sciences, Kulasekharam with parapharyngeal tumours. The period of this study was from September 2012 to August 2014. A total of 10 patients with parapharyngeal tumours who attended our department were included in the study. Every patient in this group had been evaluated with a detailed history of the symptoms, a thorough clinical examination and relevant investigations aimed at arriving at a preoperative diagnosis prior to the histopathologic examination. These details were obtained from the Medical Records Department. Surgery was the only treatment modality used in our group. The type of approach was chosen after a careful analysis of the size, site and extend of the lesion. The peri-operative events, Post-operative complications, histology and patient status at follow-up were noted.

RESULTS

The age range of our study group was from 30 years to 50 years; the mean was 43.4 years and the median, 45.5 years. The sex distribution among patients were 3:7 (Male:Female). The most common presenting symptoms were painless neck swelling, as observed in seven patients (70%), Throat discomfort and intraoral swelling, in two patients (20%) each, Ear ache and Haemoptysis in one patient (10%) each. Among the tumour types the salivary group comprised the majority of cases (50%). The miscellaneous group accounted for 40% followed by the neurogenic group (10%). Out of the 10 cases in our series pleomorphic adenomas were the commonest (50%), which were followed by lymphangioma (20%). The remaining 30% were comprised equally by neurilemmoma, haemangiomas and branchial cyst (Table-1). The transparotid approach was the commonly employed one in the series. The transcervical route was used in three cases. The transoral approach was used for carefully selected cases of lymphangioma and the minor salivary gland tumour which presented as haemoptysis (Table -2).

Table-1: Histological Types among patients

HISTOLOGICAL TYPES		
Types	Number of Cases	Percentage (%)
Pleomorphic adenoma	5	50
Neurilemmoma	1	10
Lymphangioma	2	20
Haemangioma	1	10
Branchial cyst	1	10

Table-2: Surgical approaches used for treatment

SURGICAL APPROACH		
Approach	Number of Cases	Percentage
Transparotid	5	50
Transcervical	3	30
Transoral	2	20

DISCUSSION

Pathologically there are three main groups of primary tumours in the parapharyngeal space, Salivary gland tumours, Neurogenic tumours and Paragangliomas. There are rarer ones as well, namely haemangiomas, branchial cysts, lymphangiomas, chordomas, and sarcomas [3,4]The salivary gland tumours account for 40-60% of the parapharyngeal tumours. [5,6] In this study, five out of the ten

cases belonged to the salivary group (50%). Maran et al cited an incidence of 73% for tumours arising from the parotid gland. In our study, five out of six cases of the salivary group had their origin from the parotid gland (83%) and one from pre styloid salivary tissue. The incidence of neurogenic toumours ranges between 14% and 25%. We had only one case of neurogenic tumour. It was a neurilemmoma arising from Vagus. Pang KP et al. have reported a 3% incidence of paraganglioma. No paragangliomas occurred in our series. The miscellaneous benign tumours accounted for 40% of the cases. In our series we had four tumours in the miscellaneous group namely a lymphangioma, a branchial cyst and one case of haemangioma. As per the literature, the commonest presenting symptom of a parapharyngeal tumour would be a painless neck swelling (70%) followed by throat discomfort (20%), and intraoral swelling and ear symptoms (10%). Out of the ten cases in our series, six presented with painless neck swelling (60%), throat discomfort in two cases (20%) and intra oral swelling and ear ache in one case (10%). Interestingly, pleomorphic adenoma which originated from the pre-styloid salivary rest presented with hemoptysis. Fine needle aspiration cytology (FNAC), Computer tomography (CT) with contrast, Magnetic resonance imaging (MRI) scan and angiography form the battery of investigations in case of para pharyngeal tumors. FNAC and CT scan were done in all patients in our series. Mondel A and Raychaudhuri BK have reported a diagnostic accuracy of 88.2 % in correlation with histopathology for per oral FNAC. [7] In this study two per oral FNACs were performed and only one correlated with the histopathology (50%). FNAC and CT scan together had a diagnostic accuracy of 70% in our series. The treatment modality for all primary para pharyngeal tumors is surgery. [8,9] The trans cervical and trans parotid approaches are preferred by most surgeons. [10,11] In our series the trans parotid approach was employed in six cases and trans cervical approach in three cases. The transoral approach has been used in specially selected cases and has the advantageous of early wound healing and absence of an external scar. [12,13] The transoral approach was used in two cases in our study, first in case of lymphangioma and the second in case of a pleomorphic adenoma rising from the prestyloid salivary rest. The transoral approach had no recurrence or major complications in our series. This stresses the fact that when properly selected, the transoral approach gives adequate exposure and complete clearance with less morbidity. Mandibulotomy was not employed in our series. The case of hemangioma required blood transfusion. Minor postoperative complications were encountered. All the six patients who underwent parotidectomies had some mild form of facial weakness, but all except the facial palsy of lower division persisted. Vagal neurilemmoma which was excised transcervically had a vocal cord palsy which persisted. There were no recurrences in any of the cases during the period of study.

CONCLUSION

Despite the rarity of occurrence of primary parapharyngeal tumours, these lesions pose a unique challenge to the head and neck surgeon, with regard to both diagnosis and their management. A combination of thorough clinical evaluation, appropriate investigations and right choice of surgical approach aids the successful management of these tumours.

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